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DATE: March 9, 2012

TO: Kelley Chase, EPA Region 3 OSC
Cynthia Caporale, EPA Region 3 OASQA

THROUGH:

FROM: **Ex. 4 - CBI**

SUBJECT: VERIFICATION/COMPLETENESS CHECK – DIMOCK, PA LABORATORY DATA
File 1201015 FINAL PART 2 of 3 R33907 02 28 12 1647.pdf
File 1202001 FINAL PART 2 of 3 R33907 03 05 12 0847.pdf

INTRODUCTION

On March 7 and 8, 2012, a review of the case narratives and corresponding certificates of analysis from the EPA R3 (VOCs, SVOCs and Alcohols Reports Posted Feb 29 and Mar 05) was conducted at the SERAS facility in accordance with the Follow-Up Verification/Completeness Check agreed upon during our teleconference on Wednesday 2/8/12.

The assumptions for this review include the following: 1) Case narratives from the Regional labs and/or subcontract labs have been reviewed in accordance with Regional or Environmental Services Assessment Team (ESAT) protocols and contain all pertinent and complete information to conduct the completeness check. SERAS will base this review on the information provided by the laboratory and not on an actual data package; and 2) SERAS will relay any "red" flags to the EPA R3 personnel to resolve and determine data usability.

OBSERVATIONS

In accordance with Table 1 – Field and QC Sampling Summary (Rev01 - 2/3/12), Table 2 – Sample Analytical Requirements Summary (Rev01 – 2/3/12), Methods for Groundwater and Surface Water Samples and the R3 SOPs for SVOCs (R3QA201-090111), VOCs (R#QA210-030410) and alcohols (R3QA203-013012), the following observations were noted and need to be clarified/resolved.

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1. For VOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, trip in that order) in accordance with the National Functional Guidelines: Acetone 3.8U, methylene chloride 2.6J, naphthalene 0.5U, toluene 0.6J for sample EB01, acetone 3.9U, chloroform 7.1U, methylene chloride 2.7J, naphthalene 0.5U and toluene 0.9J for sample FB06, acetone 2.0U for samples HW18, HW26, HW20, HW20-P, HW32-P, HW33 and HW33a-P; acetone 3.3U for samples HW13 and HW18-P; acetone 2.0U and chloroform 0.5U for samples HW35 and HW52; acetone 2.2J for sample HW33b-P; acetone 3.1U for sample HW29z and chloroform 0.5U for FB07.
2. For VOCs, the LCS and MS recoveries (Batches BB20202 and BB21007) for styrene and o-xylene are missing from the laboratory report.

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3. For VOCs, the LCS recovery for Batch BB21007 for 1,2-dibromo-3-chloropropane (78%) was outside of the 80-120% criterion. Results for DBCP for samples HW26-P, HW26, HW35, HW32, HW32-P, TB13, HW33, HW33a-P, HW33b-P, TB12, HW29z, HW29, HW52, FB07, TB10 and TB11 are qualified estimated "UJ".
4. For VOCs, the MS/MSD recoveries for bromomethane (34%/45%) for sample HW35 were outside the 70-130% criterion. Bromomethane results for sample HW35 should be qualified "UJ".
5. For VOC analysis, there doesn't appear to be any precision and accuracy data for cyclohexane, Freon 113, methylacetate, methylcyclohexane or MTBE for the LCS or the MS. It is recommended that results for these compounds for all samples in this data set be flagged as estimated "UJ".
6. For SVOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, in that order) in accordance with the National Functional Guidelines: bis(2-ethylhexyl)phthalate 5.00U, diethyl phthalate 5.00U and di-n-butylphthalate 5.00U for samples EB01, FB06, HW18, HW13, HW18-P, HW25-P, HW26-P, HW26, HW35, HW20-P, HW32, HW-32P, HW33, HW52 and FB07; and bis(2-ethylhexyl)phthalate 5.00U, diethylphthalate 5.00U, di-n-butylphthalate 5.00U and butylbenzylphthalate 5.00U for samples HW20; HW33a-P, HW33b-P, HW29z and HW29.
7. For SVOCs prepared on 2/6/12 in BB20601, the mid-level spike (LCS) was spiked at 40 µg/L instead of 60 µg/L previously used. Reporting limits for pentachlorophenol should be changed to 40µg/L for samples HW25-P, HW26-P, HW26, HW35, HW20, HW20-P, HW32, HW32-P, HW33, HW33a-P, HW33b-P, HW29z, HW29, HW52 and FB07.
8. For SVOC Batch 20601, it is stated in the case narrative that results for 2-methoxyethanol and 1-methylnaphthalene are qualified "UJ" since the LCS did not contain these compounds. This reviewer agrees with the qualification but recommends that the reporting limit be raised to 60 µg/L for 2-methoxyethanol since previous batches have indicated that the recovery of this analyte at this concentration is acceptable. The reporting limit for samples identified as HW25-P, HW26-P, HW26, HW35, HW20, HW20-P, HW32, HW32-P, HW33, HW33a-P, HW33b-P, HW29z, HW29, HW52 and FB07.
9. This reviewer agrees with the raising the reporting limit to 60 µg/L for 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, hexachlorocyclopentadiene, 2-methoxyethanol, 4-nitrophenol, pentachlorophenol and 2,3,4,6-tetrachlorophenol for samples EB01, FB06, HW18, HW13 and HW18-P.
10. For SVOCs, FB07 is missing a "UJ" qualifier on the laboratory report for 1-methylnaphthalene. A qualifier of "UJ" needs to be added to the result qualifier column in Scribe for this compound and sample.
11. It is assumed that all required instrument QC (RSD, %D, minimum response factors, etc.) specified by the method was run and was either within the criteria listed in the EPA R3 SOPs or qualified based on any deficiencies.

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1. For VOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, trip in that order) in accordance with the National Functional Guidelines: Acetone 2.0U for samples HW42, HW46, HW46-P, HW34a, HW42z, HW34a-P, HW28a-P, HW40, HW40-P, HW28b-P and HW09; acetone 6.7U and toluene 0.9U for sample FB09; acetone 2.8U, bromodichloromethane 0.5U, 2-butanone 2.0U, chloroform 0.5U and o-xylene 1.0U for sample FB08; acetone 2.0U and toluene 0.5U for samples HW39, HW41 and HW41-P; bromodichloromethane 0.5U, 2-butanone 2.0U, chloroform 0.5U, toluene 0.5U and o-xylene 0.5U for FB10; and acetone 3.1U for HW39-P. For the remaining results in this batch, "U" and "J" qualifiers should be carried over into the result qualifier column.
2. For VOCs, the bromomethane recovery for the MSD (63%) was outside of the QC criterion for HW39. Bromomethane results for sample HW39 should be qualified estimated "UJ".
3. For VOC analysis, there doesn't appear to be any precision and accuracy data for cyclohexane, Freon 113, methylacetate, methylcyclohexane or MTBE for the LCS or the MS. It is recommended that results for

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these compounds for all samples in this data set be flagged as estimated "UJ".

4. For VOCs, the LCS, MS and MSD recoveries (Batch BB21005) for styrene and o-xylene are missing from the laboratory report.
5. For SVOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, in that order) in accordance with the National Functional Guidelines: bis(2-ethylhexyl)phthalate 5.00U, diethyl phthalate 5.00U and di-n-butylphthalate 5.00U for samples HW42, FB09, FB08, HW34a-P, HW28a,HW28a-P, HW39-P, HW40, HW40-P, HW41, HW41-P, HW28b-P, HW09, HW09-P and FB10; bis(2-ethylhexyl)phthalate 5.00U and di-n-butylphthalate 5.00U for samples HW46, HW46-P, HW34a and HW42z; and diethylphthalate 4.76U and di-n-butylphthalate 4.76U for sample HW39. This reviewer agrees with the remaining qualifiers assigned to samples based on LCS and MS/MSD deficiencies. All lab qualifiers with the exception of the "B" flag should be carried over to the result qualifier column in Scribe.
6. It is assumed that all required instrument QC (RSD, %D, minimum response factors, etc.) specified by the method was run and was either within the criteria listed in the EPA R3 SOPs or qualified based on any deficiencies.

cc: Ex. 4 - CBI SERAS Project Officer
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